

Long-Range Strategic Goals

Student Learning

All learners:

- access anytime and anywhere individualized, authentic learning activities using a variety of developmentally appropriate digital content, tools, resources and services.
- use information and communication technologies to collaborate, construct knowledge and provide solutions to real-world problems.
- use research-based strategies in all subject areas to improve academic achievement.
- communicate effectively with global audiences.

Leadership

All leaders:

- expect, plan, and assess appropriate technology use throughout the teaching and learning process in order to create innovative, flexible and responsive environments to maximize teaching, learning, and community involvement.
- access appropriate tools and resources and use these tools to guide instructional and administrative practice and decisions.
- develop, implement, budget for, and monitor a dynamic technology plan that expands curricular and instructional opportunities to students via digital technology in the classroom and a variety of distance learning technologies.
- provide opportunities for sustained, relevant and timely professional development opportunities that use a variety of delivery formats and implement a review process that holds staff across the district accountable for effective use of technology to enhance learning.

Preparation and Development of Educators

All educators

- exit initial preparation programs with the philosophical background and the practical knowledge and skills to facilitate the use of technology to enhance every student's learning in face-to-face and online environments.
- have anytime/anywhere access to research-based opportunities to perfect their craft by either adding new knowledge about the use of technology to enhance student learning or refining their current knowledge through self-reflection and reflection with other professionals.

Infrastructure

Through an infrastructure that provides:

- reliable anytime/anywhere access to a variety of current and emerging technologies through ubiquitous broadband with a bandwidth sufficient to make access to these resources available for all users.
- just-in-time technical assistance to support teaching and learning as well as support the administrative functions of the organization.
- measures to ensure all data is secure and accurate.
- data standards to support interoperability and accessibility for all users.

Component 1: Student Learning

The illiterate of the 21st century will not be those who cannot read and write but those who cannot, learn, unlearn, and relearn

Alvin Toffler

This component covers issues related to the developmentally appropriate use of technology to enhance learning in the classroom and the support of learning that takes place at a distance; be it in a face-to-face class or a totally online experience. This component covers the systems that need to be in place to help teachers provide data-driven, quality instruction, facilitated by technology. It also discusses the systems needed to support student access to this instruction. The *International Society for Technology in Education's National Educational Technology Standards for Students* and the newly revised *Arizona State Technology Standards* guide the development of this component.

Student Learning Goals

The goals of this component are to ensure that all learners:

- access anytime and anywhere individualized, authentic learning activities using a variety of developmentally appropriate digital content, tools, resources and services.
- use information and communication technologies to collaborate, construct knowledge and provide solutions to real-world problems.
- use research-based strategies in all subject areas to improve academic achievement.
- communicate effectively with global audiences.

Recommendations to State Leadership

- S-1. Revise the current school funding formula to provide for the support of current and emerging models of face-to-face, online, and hybrid student learning.
- S-2. Create a statewide agency to expand beyond the current Technology Assisted Project-Based Instruction program structure that manages and provides multiple forms of online instruction for PreK-20 and beyond.
- S-3. Develop a structure and funding model to support online courses so that, by 2013, all students grade 8-12 shall be required to pass at least one core course (English, mathematics, science, or social studies) in an online environment by the time they graduate.

Recommendations to the State Board of Education

- S-4. Require mastery of the *Arizona Educational Technology Standard* for all students by the eighth grade as embedded into the content areas of the *Arizona Academic Standards* to meet current and future federal legislation.
- S-5. Develop a structure to ensure the articulation and reciprocity of credits for online learning provided by traditional PREK-20 institutions and online learning providers.
- S-6. Develop a structure and funding model to support online courses so that, by 2013, all

students grade 8-12 shall be required to pass at least one core course (English, mathematics, science, or social studies) in an online environment by the time they graduate.

Recommendations to the Arizona State Department of Education

- S-7. Ensure that the elements of the *Arizona Educational Technology Standard* are embedded or cross-referenced in all other standards during the content standard's normal revision cycle.
- S-8. Continue and expand assessment of student mastery of the *Arizona Educational Technology Standard* to include all eighth grade students.
- S-9. Continue the statewide development of resources to provide students with equitable access to digital content, courses, instruction, assessments, and other self-learning resources in an online learning environment with access to hybrid and online courses.
- S-10. Encourage and support the development of innovative programs that promote parental involvement, increase communication with parents, and increase community access to learning resources.

Recommendations to Local Education Agencies

- S-11. Review district policies, curriculum, and resources to ensure that every student has the tools for an individualized, collaborative, and authentic learning experience.
- S-12. Select and deploy a variety of technology-based tools to provide differentiated instruction for every child by monitoring student assessment and suggesting developmentally appropriate content.
- S-13. Embed the *Arizona Educational Technology Standard* within the foundation curriculum at each grade level and integrate the use of digital diagnostic tools for formative evaluation to monitor progress toward the mastery of the standards.
- S-14. Select and utilize digital content, aligned to state standards, to provide online access to specialized, rigorous, dual credit, and credit recovery courses.
- S-15. Provide curriculum and resources that ensures personal safety for students in a digital world and policies that specify expectations of appropriate behavior and rules for students, parents, and teachers.

Recommendations to Higher Education

- S-16. Expand collaboration between public schools and Higher Education to develop innovative course delivery and virtual credit acquisition including, but not limited to, dual credit courses.
- S-17. Partner with private sector and public entities to develop and provide web-based instructional resources and services across PREK-20.
- S-18. Collaborate with school systems to develop strategies, methodologies, and tools for assessing the level of information literacy skills among students.
- S-19. Cooperate with school systems to develop comprehensive educational technology integration programs.

Recommendations to the Community

School Boards

- S-20. Develop policies to ensure that the *Arizona Educational Technology Standard* is embedded in all district curriculum and that all students meet this standard.
- S-21. Develop policies that ensure personal safety and ethical behavior in a digital world that specifies expectations and rules for everyone that comes in contact with district resources. This includes, but is not limited to, the development of Acceptable Use or Discipline Policies that takes into account the unique nature of emerging technologies in an educational environment.
- S-22. Provide a sustained funding stream to support the deployment of digital content and resources within the district.

Parents

- S-23. Monitor online usage to ensure that your child is using web-based resources safely and securely.
- S-24. Assist your child in using anytime/anywhere digital resources such as the *IDEAL: Home Edition*¹.
- S-25. Volunteer to tutor or assist children at your local school on using technology resources.

Professional Organizations

- S-26. Promote the use of technology to enhance student learning within the organization's aims and goals.

Private Sector

- S-27. Participate in collaboration with representatives from P-12, Higher Education, parents, businesses, and the community to share resources and services.
- S-28. Provide students opportunities to experience technology's role in the workplace by providing technology-based work experiences through internships and other means.
- S-29. Provide incentives to students to master the *Arizona Educational Technology Standard*.
- S-30. Provide flextime for community volunteers to tutor or assist students in using technology resources.
- S-31. Participate in partnerships to develop and provide low-cost, web-enabled products, services, curriculum, and content to support technology-rich learning environments.
- S-32. Develop Open Source content, curriculum, and products that are compliant with standards such as the Sharable Content Object Reference Model (SCORM) and SIF.

¹ See: [<https://www.ideal.azed.gov/home-edition>]

Component 2: Leadership

I skate to where the puck is going to be, not to where it has been.

Wayne Gretzky

This component covers the leadership at all levels necessary to successfully carry out and support technology implementation in today's schools. This component also provides a plan for the use of data to guide this implementation. The *National Educational Technology Standards for Administrators* guide the development of this component.

Leadership Goals

The goals of this component are to ensure that all leaders:

- plan for and assess appropriate technology use throughout the teaching and learning process in order to create innovative, flexible and responsive environments to maximize teaching, learning, and community involvement.
- access appropriate tools and resources and use these tools to guide instructional and administrative practice and decisions.
- develop, implement, budget for, and monitor a dynamic technology plan that expands curricular and instructional opportunities to students via digital technology in the classroom and a variety of distance learning technologies.
- provide opportunities for sustained, relevant and timely professional development opportunities that use a variety of delivery formats and implement a review process that holds staff across the district accountable for effective use of technology to enhance learning.

Recommendations to State Leadership

- L-1. Provide a sustainable funding stream for the continued development of school leadership from the principal to superintendent that supports Student Learning as detailed in the *Arizona Educational Technology Standard*.
- L-2. Continue to support the *eLearning Task Force* to make recommendations to the Department of Education and the *Technology Advisory Committee*.
- L-3. Create revenue streams that provide continued professional development and incentives for new and veteran educators to become technologically literate.

Recommendations to the State Board of Education

- L-4. Require mastery of the *Technology Leadership Standards* as embedded in the Arizona Professional Administrative Standards by all school administrators.
- L-5. Require mastery of the *Chief Technology Officer Standards* for district technology leaders and district staff who understand support the technology infrastructures within a school or district.

Recommendations to the Arizona Department of Education

- L-6. Develop and support initial preparation and professional development of school leaders from the principal to the superintendent, including Chief Technology Officers and district technology staff, to help them become fluent with the use of technology for instruction and administration to support the core educational values of a school system.
- L-7. Provide leadership and vision in planning for the effective integration of technology into teaching, learning, school, and district operations and support local leadership including the development and implementation of an online *Technology Strategic Planning Tool* that assists districts in conducting technology audits and strategic planning tailored to the needs of large and small urban districts and large and small rural districts.
- L-8. Expand *IDEAL*'s services to provide school leaders with resources and technical assistance on technology planning; facilitate and assess the use of technology in teaching, learning, and administration; and use technology tools to facilitate research-based data-driven decision-making for the collection and management of data to meet local, state and federal reporting requirements
- L-9. Continue to utilize the *Technology Advisory Committee* to conduct external reviews of state education technology initiatives and to make recommendations to the legislature and Department of Education.
- L-10. Develop a statewide *Educational Technology Leadership Conference* where district leaders can meet and share best practices.
- L-11. Identify a cadre of instructional technologists to assist school divisions in leading technology enhanced teaching and learning.

Recommendations to Local Education Agencies

- L-12. Develop assessments of district leadership in meeting the *Technology Leadership Standards* based on the model provided by the Arizona Department of Education.
- L-13. Develop and implement a comprehensive Strategic Technology Plan, tied to the district's strategic plan and school improvement plans, that ensures the instructional and administrative use of technology at the classroom, library, campus, and district level.
- L-14. Develop incentives for new and veteran educators to become technologically literate.
- L-15. Include community input into the planning and support for the integration of technology into teaching and learning.
- L-16. Coordinate the use of electronic data in district planning to support research-based decision-making focused on student success.
- L-17. Participate in collaboration with representatives from PreK-12, Higher Education, parents, businesses and community to share planning resources and services.
- L-18. Support and encourage leaders to attend and present at the *Educational Technology Leadership Conference* and other state/national/regional conferences.

Recommendations to Higher Education

Educational Leadership Programs

- L-19. Require all candidates seeking a degree in educational leadership to be proficient in the *Technology Leadership Standards*.
- L-20. Require that all faculty members in educational leadership programs are proficient in the *Teaching and Learning Standards* and the *Technology Leadership Standards* and incorporate these standards into their instruction.
- L-21. Develop and implement a program that meets the *Chief Technology Officer Standards*.

Higher Education in General

- L-22. Share expertise and technology planning resources with the State Department of Education and Local Education Agencies.
- L-23. Develop online courses housed in Management Information Systems programs that support the *Chief Technology Officer Standards*.
- L-24. Expand continuing education programs to include technology leadership training for leaders.

Recommendations to the Community

School Boards

- L-25. Hire or develop a Superintendent who understands the role of technology in teaching, learning, and administration.
- L-26. Direct the Superintendent to recruit, promote, or develop school leadership who understand the role of technology in teaching, learning, and administration.
- L-27. Annually require district personnel to develop a *District Technology Plan* that is in compliance with the *Technology Strategic Planning Tool*.

Parents

- L-28. Request participation in the technology planning process and development of appropriate policies to promote student learning through the use of developmentally appropriate technology.
- L-29. Provide financial as well as volunteer support for Local Education Agencies.

Professional Organizations

- L-30. Provide resources, professional development, and support in developing technology plans and appropriate district policies.
- L-31. Provide resources, professional development and support to school leaders on how to create, implement, and assess the developmentally appropriate use of technology to promote student learning.

Private Sector

- L-32. Participate in the technology planning process and development of appropriate policies to promote student learning.
- L-33. Provide access to industry-based standards for the development and support of technology systems.
- L-34. Create a *Loan a Professional* program to assist schools and districts with technology planning.
- L-35. Technology vendors provide technology leadership training.
- L-36. Sponsor grants that focus on technology leadership training.

Component 3: Preparation and Development of Educators

This component covers all areas of educator preparation and development including initial teacher preparation and the development of practicing professionals. The *Arizona Professional Teacher Standards*, International Society for Technology in Education *National Educational Technology Standards for Teachers*, and the *National Staff Development Council Standards* guided the development of this section of the component.

This component also covers the preparation of school leaders and Chief Technology Officers and their staff to support the use of technology to facilitate student learning. The *Arizona Professional Administrator Standards*, International Society for Technology in Education *National Educational Technology Standards for Administrators*, and the *National Staff Development Council Standards* guided the development of this section of the component.

It is important to note that there are two critical components to these recommendations. The first focuses on the **initial preparation** of the teaching professional. This activity is currently carried out in universities and community colleges around the country as well as in other post-secondary institutions. This may be through an undergraduate program that prepares new professionals or through a post-baccalaureate or graduate program that prepares professionals from other fields who have chosen to enter education.

The other component of these recommendations focuses on the **continued professional development** of current practitioners who wish to hone their craft by using new and emerging technologies. These activities may be developed and offered at a building, district, regional, or state level in either formal or informal settings.

Preparation and Development of Educators Goals

The goals of this component are to ensure that

- pre-professionals exit initial preparation programs with the philosophical background and the practical knowledge, strategies, and skills to facilitate the use of technology to enhance every student's learning in face-to-face and online environments.
- practicing professionals have anytime/anywhere access to research-based opportunities to perfect their craft by either adding new knowledge about the use of technology to enhance student learning or refining their current knowledge through self-reflection and reflection with other professionals.

Recommendations to State Leadership

- P-1. Develop a funding model to support the initial preparation and continued development of certified professionals that focuses on the use of technology to support student learning.

- P-2. Develop a funding model to support the initial preparation and continued development of school leaders that focuses on the use of technology to support student learning.
- P-3. Develop a funding model to support the initial preparation and continued development of Chief Technology Officers and their support staff that focuses on the use of technology to support student learning.

Recommendations to the State Board of Education

- P-4. Develop a structure to ensure that all Educators master the *Teaching and Learning Standards*
- P-5. Develop a structure to ensure that all School Leaders master the *Technology Leadership Standards*.
- P-6. Develop a structure to ensure that all Chief Technology Officers master the *Chief Technology Officer Standards*.

Recommendations to the Arizona Department of Education

- P-7. Develop and implement a set of *Teaching and Learning Standards* that define the skills and philosophy required by educators to facilitate student learning using technology. These standards should be embedded in the *Arizona Professional Teacher Standards*, Components 1-5, 8, and 9.
- P-8. Develop and implement a set of *Technology Leadership Standards*, informed by the International Society for Technology in Education's *National Educational Technology Standards for Administrators*. These standards should be embedded in the *Arizona Professional Administrative Standards*, Components 3, 4, and 5.
- P-9. Develop and implement a set of *Chief Technology Officer Standards*, informed by the *National Educational Technology Standards for Administrators* for the development of district technology leaders.
- P-10. Develop model assessments of the *Teaching and Learning Standards*, *Technology Leadership Standards*, and *Chief Technology Officer Standards* that include performance-based, on-line assessments and/or electronic portfolios.
- P-11. Develop and support high-quality professional development that is free or as nearly free as possible and easily acceptable by professionals around the state. These development opportunities should be based on the National Staff Development Council's Standards for Staff Development, which supports the *Teaching and Learning Standards* and the *Technology Leadership Standards*.
- P-12. Require districts to annually report the number of educators that meet the *Teaching and Learning Standards*, *Technology Leadership Standards*, and *Chief Technology Officer Standards*.
- P-13. Provide information, models, training, and technical assistance on the identification and effective use of developmentally appropriate technologies.
- P-14. Expand *IDEAL*'s services as a clearinghouse of research-based resources that provides anytime/anywhere access to information such as model instruction and assessment strategies, online and face-to-face training, and technical assistance on the identification and effective use of developmentally appropriate new and emerging technologies that facilitate student learning.
- P-15. Partner with professional development providers (Arizona Technology in Education

- Alliance (AzTEA), International Society for Technology in Education (ISTE), K-12 Center, Association for Supervision and Curriculum Development (ASCD), National Staff Development Council (NSDC), INTEL, Arizona School Services through Educational Technology (ASSET), Public Broadcasting Stations and/or other professional development providers) to develop programs that maximize the use of technology to enhance teaching and learning.
- P-16. Create and support a *Master Technology Teacher* program that certifies professionals who have demonstrated exemplary use of technology to facilitate student learning.

Recommendations to Local Education Agencies

- P-17. Provide access to professional development opportunities to meet the Teaching and Learning Standards, Technology Leadership Standards, and Chief Technology Officer Standards.
- P-18. Develop and prepare administrators and district professional development personnel to conduct consistent observations of classroom instruction using a technology integration observation form to determine levels of technology integration and effective uses of technology that is incorporated into all formal professional evaluation.
- P-19. Develop funding models that support participation in statewide, technology professional development opportunities for all teachers and administrators.
- P-20. Create and support the development of professional learning communities and circles of critical friends to support learning and reflection by instructional personnel.
- P-21. Create tools and processes that document an educator's participation in a professional development opportunity.
- P-22. Continue to develop partnerships with Higher Education to pilot new instructional strategies for integrating technology.
- P-23. Encourage and support teacher participation in the Master Technology Teacher program.
- P-24. Utilize innovative strategies for anytime/anywhere delivery of ongoing professional development, including online and other distance learning models and digital content delivery services to meet the diverse and personal learning needs of all educators.
- P-25. Provide instructional coaches and mentors to support technology integration efforts to improve learning in core curriculum areas.
- P-26. Provide professional development on the impact of non-compliance with district policies regarding the use of technology and include compliance with these policies as a component of teacher evaluation and observation instruments.
- P-27. Use grants and, where possible, district funds to host and cosponsor regional and statewide technology symposia and training that promote the sharing of instructional strategies and techniques.

Recommendations to Higher Education

Initial Teacher Preparation and Educational Leadership Programs

- P-28. Require that all teacher candidates be proficient in the *Teaching and Learning Standards* including the knowledge and skills to teach in an online environment.
- P-29. Require that all faculty members in Initial Teacher Preparation Programs be

- proficient in the *Teaching and Learning Standards* and incorporate these standards into their instruction.
- P-30. Provide pedagogical support for transforming teaching and learning based on research and proven models for systemic change in the classroom.
 - P-31. Require that all candidates seeking a degree in educational leadership be proficient in the *Technology Leadership Standards* including the knowledge, strategies, and skills to evaluate the effective use of technology in the classroom.
 - P-32. Require that all faculty members in educational leadership programs be proficient in the *Teaching and Learning Standards* and the *Technology Leadership Standards* and incorporate these standards into their instruction.
 - P-33. Develop and implement a program that meets the *Chief Technology Officer Standards*.
 - P-34. Collaborate with K-12 and other institutions and organizations and states to eliminate barriers to teaching and learning and professional development delivered via online and other distance learning technologies.
 - P-35. Support field-based educator preparation and development on the integration of technology into teaching and learning.

Higher Education in General

- P-36. Model administrative leadership of the use of technology throughout Higher Education institutions.
- P-37. Encourage the utilization of online and other distance learning as an institution for delivery of professional development and degree programs by Higher Education institutions.

Recommendations to the Community

School Boards

- P-38. Annually review district professional development activities to ensure alignment with the *Teaching and Learning Standards* and *Technology Leadership Standards*.
- P-39. Review, develop, and implement strategies to provide professional development that moves professionals in the district to at least the *Target* level of technology use on the *Teaching and Learning Standards*.
- P-40. Review all board policies, regulations, procedures and practices across the district to create consistent goals and process to improve student learning facilitated by technology.

Parents

- P-41. Work with local school districts to support professional development activities by providing funding or volunteering to help coordinate an activity.

Professional Organizations

- P-42. Identify grants that support professional development.
- P-43. Provide sustained professional development aligned with the *National Staff Development Council: Staff Development Standards* to promote the effective use of technology.

- P-44. Create opportunities to encourage social/professional networking among educators related to the integration of technology to improve student learning.

Private Sector

- P-45. Participate in collaboration with representatives from PreK-12, Higher Education, parents, businesses and community to share professional development resources and services.
- P-46. Collaborate with classroom teachers to extend learning opportunities outside of the traditional Higher Education model.
- P-47. Provide a pedagogical training program as part of software purchases.
- P-48. Provide educators opportunities to experience technology's role in the workplace by providing technology-based work experiences through internships and other means.
- P-49. Provide internships and other opportunities for educators to remain current in their discipline related skills.

Component 4: Infrastructure

While the previous three components provide the human infrastructure necessary to implement the effective use of technology, this component covers the hardware and software systems necessary to support the other three components. To support the human components of this plan, all public, private, and charter schools throughout the state should provide an infrastructure that provides learners with access to digital content, curriculum, tools, resources and assessment using a variety of current and emerging technologies. Educators should be provided with digital access to their students anytime and anywhere and the research-based digital resources they need to facilitate their student's learning. In addition, educators at all levels from initial preparation to retirement should be provided with access to the research-based digital resources and professional development opportunities they need to learn and develop their craft. Finally, school leaders from assistant principals to the superintendent and technology support staff should be provided with the tools and resources they need to support the instructional and administrative core business practices of their organization by promoting anytime/anywhere learning and supporting the administrative activities of the organization through data-driven decision making.

The Essential Elements section of the ISTE (*National Educational Technology Standards for Students*, *National Educational Technology Standards for Teachers*, and the *National Educational Technology Standards for Administrators*) Standards and the *School Facilities Board's 21st Century Schools Report* guide the development of this component.

Infrastructure Goals

To accomplish this, the infrastructure should:

- provide reliable anytime/anywhere access to a variety of current and emerging technologies through ubiquitous broadband with a bandwidth sufficient to make access to these resources available for all users.
- provide just-in-time technical assistance to support teaching and learning as well as support the administrative functions of the organization.
- provide measures to ensure all data is secure and accurate.
- provide data standards to support interoperability and accessibility for all users.

Recommendations to State Leadership

- I-1. Develop a multi-agency effort in cooperation with the private sector to build statewide high-speed broadband access to the Internet with sufficient broadband capacity and capability to support a digital learning environment.
- I-2. Develop a State-wide agency, similar to the Utah Education Network¹, to provide access to developmentally appropriate digital content to all Arizona students.

¹ See <http://www.uen.org>

- I-3. Create sustainable long-term financing to ensure that all Arizona schools have equitable access to hardware and software that is refreshed on an industry-standard basis necessary to support the delivery of anytime/anywhere access to a digital learning environment.
- I-4. Create sustainable long-term financing to fund new school construction and retrofitting of existing schools to create a technology infrastructure necessary to support a digital learning environment.

Recommendations to the State Board of Education

- I-5. Charge the State Department of Education with the development of a set of *Minimum Standards of Technology-Based Resources* for districts to set a baseline level of developmentally appropriate technology that supports standards for instructional systems (hardware, software, and infrastructure).
- I-6. Charge the State Department of Education with the development of an ***Arizona Technology Readiness Chart***, similar to that developed by the CEO Forum² to establish benchmarks for the use of developmentally appropriate technology to promote student learning.

Recommendations to the Arizona State Department of Education

- I-7. Work with agencies and organizations to create and disseminate a ***Minimum Standard of Technology-Based Resources*** to set a baseline level of developmentally appropriate technology that supports anytime/anywhere access to a digital learning environment (hardware, software, and infrastructure) for all of Arizona's Students.
- I-8. Work with agencies and organizations to create and disseminate an ***Arizona Technology Readiness Chart***, similar to that developed by the CEO Forum³ to establish benchmarks for the use of developmentally appropriate technology that promotes student learning.
- I-9. Develop and disseminate models of technology integration and support for large, small, urban, and rural LEAs to support anytime/anywhere access to a digital learning environment for all of Arizona's students that is consistent with the Federal Communication Commission's E-Rate Long Range Plan, provides a common data standard for student data in a safe and secure environment that allows for system recovery in case of disaster and demonstrates how to conduct long-range technology planning.
- I-10. Participate in the collaboration between public and private entities to provide anytime/anywhere equitable access to robust broadband network resources for all students, educators and parents.
- I-11. Develop face-to-face and online opportunities for support staff from districts with common size, interests, and technologies to meet and share best practices in infrastructure support

² See: [<http://www.iste.org/starchart/>]

³ See: [<http://www.iste.org/starchart/>]

Recommendations to Local Education Agencies

- I-12. Annually review the *Minimum Standards of Technology-Based Resources*⁴ provided by the Arizona Department of Education for district alignment with these standards and work to bring district technology to at least these minimum levels by retrofitting existing facilities *Resources* and, where possible, build the capacity to adapt to new technologies.
- I-13. When constructing new school facilities, insure that these facilities meet at least the *Minimum Standards of Technology-Based Resources* and, where possible, build the capacity to adapt to new technologies.
- I-14. Review, develop, and implement strategies to move all educators within the LEA to at least the *Target* level of technology use on the *Arizona Technology Readiness Chart*⁵.
- I-15. Explore and implement new business strategies and practices for the purchase and support of the technology infrastructure and services.
- I-16. Provide and maintain an infrastructure for communications with parents and community members, including year-round anytime/anywhere access to school news, educational resources, data and personnel.
- I-17. Develop strategies and implement best practices that facilitate anytime/anywhere access to digital learning resources by all students within the district. This includes secure access to network recourse and ensure that critical technology applications and data can be recovered in a timely manner.
- I-18. Provide funding and release time for support staff from districts of common size, interests, and technologies to meet and share best practices in infrastructure support.

Recommendations to Higher Education

Initial Teacher Preparation and Educational Leadership Programs

- I-19. Acquire and maintain current technology for educator preparation facilities.
- I-20. Establish infrastructure partnerships with Local Education Agencies for anytime/anywhere content delivery and professional development.

Higher Education in General

- I-21. Partner with the Department of Education, the private sector, and Local Education Agencies to design and implement an accessible high-speed internet with access to national and international resources.

Recommendations to the Community

School Boards

- I-22. When constructing new school facilities, insure that these facilities meet at least the *Minimum Standards of Technology-Based Resources* and, where possible, build the capacity to adapt to new technologies.

⁴ See Infrastructure: Recommendations to the State Department of Education, School Facilities Board

⁵ See Infrastructure: Recommendations to the State Department of Education, School Facilities Board

- I-23. Review, develop, and implement strategies to move all educators within the LEA to at least the *Target* level of technology use on the *Arizona Technology Readiness Chart*⁶.
- I-24. Explore and implement new business strategies and practices for the purchase and support of the technology infrastructure and services.
- I-25. Review, develop, and implement strategies to move to at least the *Target* level of technology use on the *Arizona Technology Readiness Chart*⁷.

Parents

- I-26. Ensure that your student has access to high-speed Internet connectivity either at home or through a community resource.
- I-27. Ensure that your student has access to a personal computing device capable of supporting access to the Internet and district software either at home or through a community resource.
- I-28. Support anytime/anywhere access to personal computing devices and to existing and emerging networks for communication with schools and community learning facilities.
- I-29. Advocate to the State Legislature to provide funding to support high-speed Internet connectivity to all schools in Arizona.
- I-30. Advocate to the State Legislature to provide funding to support the technology infrastructure necessary to support student learning in all schools in Arizona.

Professional Organizations

- I-31. Develop face-to-face and online opportunities for support staff from districts with common size, interests, and technologies to meet and share best practices in infrastructure support.
- I-32. Share best practices from education, business, and industry in the support of school infrastructures.

Private Sector

- I-33. Advocate to the State Legislature to provide funding to support high-speed Internet connectivity to all schools in Arizona.
- I-34. Advocate to the State Legislature to provide funding to support the technology infrastructure necessary to support student learning in all schools in Arizona.
- I-35. Develop strategic partnerships with communities to provide anytime/anywhere accessible wireless networks and computing devices available for all citizens.
- I-36. Establish competitive statewide utilities for high-speed broadband connectivity that can provide low cost, equitable Internet access for all students both from school and from home to support anytime, anywhere online and distance learning.
- I-37. Share strategies and best practices for security audits and business continuity planning that can be conducted at the district and local school level.
- I-38. Develop strategic partnerships with local education agencies to foster infrastructure support, including promotion of interoperability and accessibility, and the use of open-source software and web-based services.

⁶ See Infrastructure: Recommendations to the State Department of Education, School Facilities Board

⁷ See Infrastructure: Recommendations to the State Department of Education

- I-39. Develop software applications that meet interoperability, accessibility, and usability standards, assist schools in data-driven decision-making, and enable anytime/anywhere parental access.
- I-40. Develop low-cost, standardized, accessible, scalable, personal computing devices and services for PreK-20 students to support educational objectives and enable anytime/anywhere 1:1 computing.
- I-41. Community organizations establish grant programs in support of technology use in schools.
- I-42. Vendors participate in consortiums to allow group purchases of high-ticket hardware, software, and networking resources.